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(54) Title: IMPROVED THERMOPLASTIC POLYOLEFIN ALLOYS AND PROCESS FOR THEIR PREPARATION

(57) Abstract: A thermoplastic polyolefin alloy having high (notched) Izod impact strength and process for its preparation are disclosed. The alloys of this invention comprises of a polypropylene block copolymer as a base polymer, an elastomer, a compatibilizer and optionally a natural filler and is prepared by melt blending a twin-screw extruder (or Buss-co-kneader) the above ingredients. The polyolefin alloys of this invention exhibit very high (notched) Izod impact strength of 60 to 90 kg. cm/cm, flexural modulus of 6,000 to 8,000 kg/cm², tensile strength at yield of 150 to 200 kg/cm², and heat deflection temperature of 60 to 70 °C with 4.6 kgf stress. The alloys also possess melt flow index of 2-5 g/10 min. when tested according to ASTM D1238 and allow injection molding, compression molding, thermoforming and other conventional techniques to be applied for making end products that demand high impact strength.



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